



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-2403; Project Identifier AD-2023-00888-T]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain The Boeing Company Model MD-11 and MD-11F airplanes equipped with General Electric (GE) CF6-80C2D1F high-bypass turbofan engines. This proposed AD was prompted by a report of a Model MD-11F airplane experiencing an uncommanded deployment of a thrust reverser in-flight at low altitude. This proposed AD would require a one-time detailed inspection of the engine pylon thrust reverser control system wire harnesses and applicable on-condition actions. The proposed AD would also require repetitive detailed inspections and wire integrity tests of the engine thrust reverser control system wire harnesses (in the pylon), junction box and junction box cover, left side and right side thrust reverser electrical harnesses, core (engine compartment) miscellaneous wire harness assembly, and 30 degree bulkhead wire harness assembly; and applicable on-condition actions. This AD also requires reporting. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to [regulations.gov](https://www.regulations.gov). Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-2403; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

- For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; website myboeingfleet.com.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-2403.

FOR FURTHER INFORMATION CONTACT: Kevin Nguyen, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206-231-3555; email kevin.nguyen@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2023-2403; Project Identifier AD-2023-00888-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Kevin Nguyen, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206-231-3555; email kevin.nguyen@faa.gov. Any commentary that the FAA

receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA has received a report of an MD-11F airplane equipped with three GE CF6-80C2D1F high-bypass turbofan engines experiencing an in-flight deployment of the (left) engine 1 thrust reverser at approximately 500 feet above ground level. Both left and right translating cowls of the thrust reverser deployed. In the Engine 1 pylon, damaged wiring was found, which could have caused or contributed to the deployment of the two transcowls.

The FAA is issuing this AD to address uncommanded deployment of a thrust reverser in flight at low altitude, which could result in loss of control of the airplane and loss of continued safe flight and landing.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Service Bulletin MD11-78A017, dated December 4, 2023. This service information specifies work package 1 inspection procedures to do an initial detailed inspection of the engine 1, engine 2, and engine 3 pylon thrust reverser control system wire harnesses. The service information also specifies work package 2 procedures to do repetitive detailed inspections and wire integrity tests at the following locations: engine 1, engine 2, and engine 3 thrust reverser control system wire harnesses (in the pylon); junction box and junction box cover (only detailed inspection); left side and right side thrust reverser electrical harnesses; core (engine compartment) miscellaneous wire harness assembly; and 30 degree bulkhead

wire harness assembly. The service information also specifies applicable on-condition actions (includes repairs, replacements, installations, post-replacement inspections and tests, and return to service tests). The service information also specifies that accomplishing the initial inspections and tests by doing Action 1 through Action 3 in work package 2 terminates the need to do the inspection in accordance with Part 2 as required in work package 1. However, this substitution of actions does not change the compliance time of work package 1 as specified in Table 1 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin MD11-78A017, dated December 4, 2023.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would require accomplishing the actions identified as “RC” (required for compliance) in the Accomplishment Instructions of Boeing Alert Service Bulletin MD11-78A017, dated December 4, 2023, already described and except for any differences identified as exceptions in the regulatory text of this proposed AD. This proposed AD also requires reporting findings to Boeing. For information on the procedures and compliance times, see this service information at regulations.gov under Docket No. FAA-2023-2403.

Interim Action

The FAA considers this proposed AD to be an interim action. The reports that are required by this proposed AD will enable the manufacturer to obtain better insight into the nature, cause, and extent of the unsafe condition, and eventually to develop final action to address the unsafe condition. If final action is later identified, the FAA might consider further rulemaking.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 79 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspections and Tests	Up to 78 work-hours X \$85 per hour = Up to \$6,630 per inspection/test cycle	\$0	Up to \$6,630 per inspection/test cycle	Up to \$523,770 per inspection/test cycle
Reporting	1 work-hour X \$85 per hour = \$85 per inspection/test cycle	0	85 per inspection/test cycle	6,715 per inspection/test cycle

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of the proposed inspections and tests. The agency has no way of determining the number of aircraft that might need these repairs/replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Repairs/Replacements/ Tests	Up to 120 work-hours X \$85 per hour = Up to \$10,200	\$0*	Up to \$10,200

*The FAA has received no definitive data that would enable the FAA to provide a parts cost estimate for the on-condition repairs/replacements specified in this proposed AD.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this

collection of information is estimated to take approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

The Boeing Company: Docket No. FAA-2023-2403; Project Identifier AD-2023-00888-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model MD-11 and MD-11F airplanes, certificated in any category, equipped with General Electric (GE) CF6-80C2D1F high-bypass turbofan engines.

(d) Subject

Air Transport Association (ATA) of America Code 78, Engine Exhaust.

(e) Unsafe Condition

This AD was prompted by a report of a Model MD-11F airplane experiencing an uncommanded deployment of a thrust reverser at approximately 500 feet above ground level. The FAA is issuing this AD to address uncommanded deployment of a thrust reverser in-flight at low altitude, which could result in loss of flight control of the airplane and loss of continued safe flight and landing.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified in paragraph (h) of this AD: At the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin MD11-78A017, dated December 4, 2023, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin MD11-78A017, dated December 4, 2023.

(h) Exceptions to Service Information Specifications

(1) Where the Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Service Bulletin MD11-78A017, dated December 4, 2023, use the phrase “the original issue date of this service bulletin,” this AD requires using “the effective date of this AD.”

(2) Where step 6.c.(2)(a), “CONDITION 14 OPTION 1 (ACTION 1)” and step 6.c.(2)(b)4d), “CONDITION 14.4 OPTION 2 (ACTION 1)” of the Accomplishment Instructions of Boeing Service Bulletin MD11-78017, dated December 4, 2023, specify to replace the junction box, that replacement must be accomplished in accordance with

“PART 12: JUNCTION BOX REPLACEMENT” of the Accomplishment Instructions of Boeing Service Bulletin MD11-78017, dated December 4, 2023.

(i) Reporting

At the applicable time specified in paragraph (i)(1) or (2) of this AD, submit a report to The Boeing Company via the Boeing Communication System (BCS) and include the information specified in Appendix C of Boeing Alert Service Bulletin MD11-78A017, dated December 4, 2023.

(1) If the inspection or test was done on or after the effective date of this AD: Submit the report within 30 days after the inspection or test.

(2) If the inspection or test was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR-520, Continued Operational Safety Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of AIR-520, Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to 9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, AIR-520, Continued Operational Safety Branch, FAA, to make those findings.

To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) Except as specified by paragraph (g) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(4)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

For more information about this AD, contact Kevin Nguyen, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206-231-3555; email kevin.nguyen@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin MD11-78A017, dated December 4, 2023.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; website myboeingfleet.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on December 22, 2023.

Caitlin Locke, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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